

Technical Information

MicSera Dulbecco's Modified Eagle

Medium/ Nutrient Mixture F-12 Ham (DMEM/F12, 1:1 Mixture)

With Sodium bicarbonate, 15mM HEPES buffer and Trace elements Without L-Glutamine
1X Liquid Cell Culture Medium requiring reduced serum supplementation

Product Code: RSL1006

Application:- MicSera media are based on the classical formulations supplemented with insulin, transferrin and other advanced nutrients. The additional nutrients help in reducing the percentage of serum required to grow most of the common cell lines. The percentage of serum reduction may vary with type of cell line used. For nonfastidious cell lines serum can be reduced from 10% to as low as 1%. For fastidious cell lines serum usage can be reduced from 10% to 2.5%. MicSera medium can be used without prior adaptation and sub cultured using normal procedures. Reduced serum supplementation improves the reproducibility of experimental results by decreasing the variability caused due to undefined serum constituents. It also facilitates down regulation process in bioassays and in purification process of culture products.

RSL1006 is MicSera DMEM/Nutrient Mixture F-12 Ham with trace elements, sodium bicarbonate and HEPES buffer. HEPES, a zwitterionic buffer having a pKa of 7.3 at 37°C prevents the initial rise in pH that tends to occur at the initiation of a culture and increases the buffering capacity of the medium. It does not contain L-glutamine. Users are advised to review the literature for recommendations regarding medium supplementation and physiological growth requirements specific for different cell lines.

Composition**

Ingredients	mg/Litre
INORGANIC SALTS	
Ammonium metavanadate	0.00058
Ammonium molybdate tetrahydrate	0.00618
Calcium chloride dihydrate	154.500
Copper sulphate pentahydrate	0.0013
Disodium hydrogen phosphate	71.020
Ferric nitrate ninahydrate	0.050
Ferrous sulphate heptahydrate	0.417
Magnesium chloride hexahydrate	61.200
Magnesium sulphate anhydrous	48.840
Manganese sulphate	0.000151
Nickel chloride	0.00012
Potassium chloride	311.800
Sodium bicarbonate	1200.000
Sodium chloride	6996.000
Sodium dihydrogen phosphate	54.300
Sodium metasilicate nonahydrate	0.0142
Sodium selenite	0.00519
Stannous chloride dihydrate	0.00011
Zinc sulphate heptahydrate	0.432
AMINO ACIDS	
Glycine	18.750
L-Alanine	4.450
L-Arginine hydrochloride	147.500

L-Asparagine monohydrate	7.500
L-Aspartic acid	6.650
L-Cysteine dihydrochloride	17.560
L-Cystine hydrochloride monohydrate	31.290
L-Glutamic acid	7.350
L-Histidine hydrochloride monohydrate	31.480
L-Isoleucine	54.470
L-Leucine	59.050
L-Lysine hydrochloride	91.250
L-Methionine	17.240
L-Phenylalanine	35.480
L-Proline	17.250
L-Serine	26.250
L-Threonine	53.450
L-Tryptophan	9.020
L-Tyrosine disodium salt	48.100
L-Valine	52.850

VITAMINS

Choline chloride	8.980
D-Biotin	0.0035
D-Ca-Pantothenate	2.240
Folic acid	2.660
Niacinamide	2.020
Pyridoxal hydrochloride	2.000
Pyridoxine hydrochloride	0.031
Riboflavin	0.219
Thiamine hydrochloride	2.170
Vitamin B12	0.680
myo-Inositol	12.600

OTHERS

D-Glucose	3151.000
DL-Thioctic acid	0.105
Growth Supplement mix	Proprietary
HEPES buffer	3574.500
Hypoxanthine	2.400
Linoleic acid	0.042
Phenol red sodium salt	8.630
Putrescine hydrochloride	0.081
Sodium pyruvate	110.000
Thymidine	0.365

Methodology

1. Add 20ml of 200mM L-glutamine (TCL2012) or MiGlutaXL supplement (TCL2030) for 1 litre of medium.

Recommendations for use with MicSera Media:

- MicSera media have been optimized at 2.5% serum concentration for a broad range of cell culture applications. Recommended concentrations of serum using MicSera media ranges from 1-5%. However the concentration of serum used may need to be adjusted for specific cell types or applications to achieve optimal results. Titration of FBS concentration is recommended to determine maximum serum reduction.
- MicSera media are provided as 1X solutions and need to be supplemented with 4mM Glutamine and required amount of reduced serum.
- In case of antibiotics being used to control contamination, it is recommended to reduce the amount of antibiotics in proportion to the amount of serum reduced.

Material required but not provided

L-Glutamine solution 200mM (TCL1012)
MiGlutaXL Supplement (TCL1030)
Fetal Bovine Serum (BA3112/BA12432)

Quality control

Appearance

Red colored, clear solution.

pH

7.00 -7.60

Osmolality in mOsm/Kg H2O

300.00 -340.00

Sterility

No bacterial or fungal growth is observed after 14 days of incubation, as per USP specification.

Cultural Response

The growth promotion capacity of the medium is assessed qualitatively by analyzing the cells for the morphology and quantitatively by estimating the cell counts and comparing it with a control medium through minimum three subcultures.

Endotoxin Content

NMT 5EU/ml

Storage and Shelf Life

- Store at 2-8°C away from bright light.
- Shelf life is 12 months.
- Use before expiry date given on the product label.

Disclaimer :

- User must ensure suitability of the product(s) in their application prior to use.
- The product conforms solely to the technical information provided in this booklet and to the best of knowledge research and development work carried at **CDH** is true and accurate.
- **Central Drug House Pvt. Ltd.** reserves the right to make changes to specifications and information related to the products at any time.
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- Do not use the products if it fails to meet specifications for identity and performance parameters.